

Claims

1. A method for printing a plastic surface (18) by means of hot-stamping with a metallic hot-stamping tool (3) that can be heated and is coated with plastic, wherein the plastic-coated outer surface of the hot-stamping tool forms the stamping surface (7) that transfers the pigment layer (9) applied onto the carrier foil (10) onto the work piece (16) when the carrier foil (10) is pressed against the surface (18) of a work piece (16) to be printed,
characterized in
that the work piece surface (18) to be printed is preheated before the printing process with the aid of a heating device (22), and in that the temperature of the stamping surface (7) of the hot-stamping tool lies between 140 °C and 240 °C, preferably between 200 °C and 220 °C.
2. The method according to Claim 1,
characterized in
that the heating power of the heating device (22) is adapted to the texture of the surface to be printed, e.g., the color, the roughness, the material, etc. (18).
3. The method according to Claim 2,
characterized in
that the texture of the surface (18) of the work piece (16) to be printed is determined by means of a sensor (24) that forwards the thusly determined data to an evaluation device (26), wherein said evaluation device subsequently adjusts the heating power of the heating device (22) accordingly.
4. The method according to Claim 1,
characterized in

that the heating device (22) locally heats the work piece surface to be printed by means of an infrared lamp or a fan heater.

5. The method according to Claim 1,
characterized in
that the work piece surface (18) is heated to a temperature between 30 °C and 250 °C.
6. The method according to Claim 1,
characterized in
that the work piece surface (18) is heated to a temperature between 80 °C and 120 °C.
7. The method according to Claim 1,
characterized in
that the plastic surface (18) forms part of a plastic toothbrush.
8. The method according to Claim 1,
characterized in
that the toothbrush consists of a thermoplastic plastic, preferably of polypropylene.
9. The method according to Claim 3,
characterized in
that the sensor (24) consists of a pyrometer.
10. The method according to Claim 1,
characterized in
that the hot-stamping tool is coated with a silicon layer.
11. The method according to Claim 10,
characterized in
that the silicone layer has a thickness between 1 and 4 mm, preferably between 2 and 3 mm.